CASES

TCTAP C-156

Successful but Frustrating Management of Acute Closure Due to Long-segment Coronary Dissection with Propagating Intramural Hematoma Immediate After Stenting

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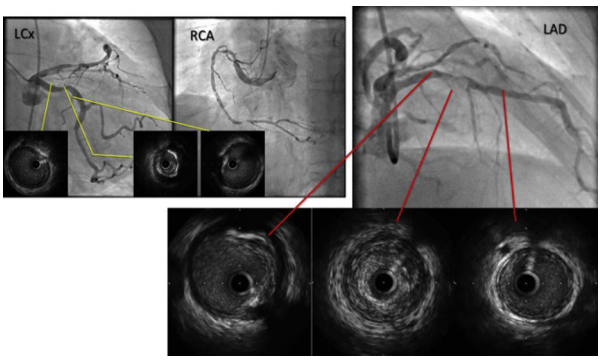
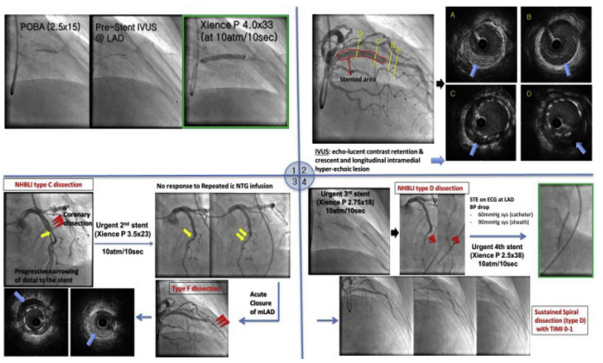
[Clinical Information]
Patient initials or identifier number:
KMS
Relevant clinical history and physical exam:
Clinical Hx: She has been suffering from slitting upper back pain during exercise for 1 year. Recently, she experienced squeezing chest pain with dyspnea (NYHA II-III) during walking for several days.
Past Hx: HTN / DM 30YA/ - (while on medication: dilteran 180mg qD, rhonal 100mg, lasix 0.5T, aldaton 25mg qD, depas 0.5T tid)
Physical exam: VS: 145/66mmHg-HR 59bpm
Relevant test results prior to catheterization:
Laboratory finding: s-gluc 159mg/dL, HbA1c 7.4, TC 195-LDL 102-HDL 60-TG185 mg/dL, hsCRP 3.38mg/dL, BNP 210.68 pg/mL, cardiac enz: WNL
ECG: T-wave inversion in I,aVL, V2-6
CXR: mild cardiomegaly with very tortuous aorta
Echo: enlarged LA (LAVi=43), LVH (RWT=0.45), EF=55%, RWMA (Hypokinesia of anterior septum from mid ventricle to apex), compatible with LAD territory ischemia
Relevant catheterization findings:
CAG
pLAD, diffuse irregular 80-95% LN with positive remodeling on IVUS
pLCx, tubular eccentric 70% LN on IVUS
p-mRCA, diffuse irregular 80% LN
dRCCA, diffuse eccentric 95% LN
Conc) CAOD (3VD)
[Interventional Management]
Procedural step:
Target lesion; os-pLAD
guiding catheter: JL6-4 / guiding wire: 014 PTCA G/W
Puncture site: Rt femoral artery
Predilation was done with PTCA balloon (2.5x15) at 10 atm/10sec. F/U angio revealed (60)% residual stenosis without dissection. A coronary stent (Xience P 4.0x33) was inserted and inflated at 10atm/ 10sec. F/U angio revealed (0)% residual stenosis of lesion without dissection. Immediate post-stent IVUS (i-Lab) demonstrated well apposed stent with minor distal edge dissection without hemodynamic change.

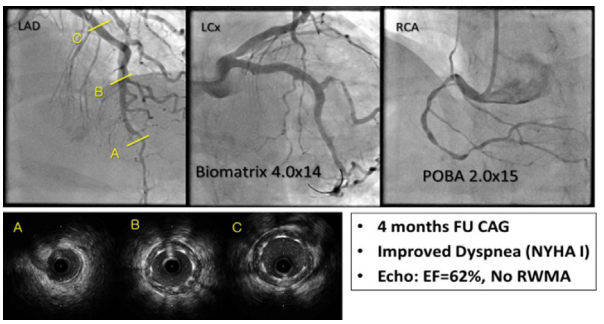
After checking IVUS at pLCX, FU angio revealed contrast extravasation outside the patent stented segment suggesting dissecting flap at distal margin (NHLBI type C). Additional overlapping short stent (Xience P 3.5x23) was inserted at pmLAD for taking-up the dissection without hesitation. IVUS demonstrated echolucent contrast retention peri-stent and longitudinal crescent-like intramedial hyperechoic lesion suggesting intramural hematoma (No response to intracoronary NTG infusion). Unfortunately, FU angio revealed sudden abrupt luminal narrowing at more distal part of additional stented margin (NHLBI type F). Urgently additional 3rd stent (Xience P 2.75x18) was inserted at IMH site. FU angio revealed more advanced luminal narrowing and spiral dissection to far distal part of LAD (NHBLI type D) with flow limitation (TIMI 0-1). At that time, the patient complained on going squeezing chest pain. ST segment elevation on ECG and very low BP (60mmHg sys) were noted.

Inevitably, 4th stent (Xience P 2.5x38) was inserted at m-dLAD. FU angio still showed spiral dissecting flap at far distal part of LAD with better flow (TIMI 1-2). Adjuvant sequential balloon dilation was done with PTCA balloon (2.5x15, 2.75x18, 3.5x23, 4.0x33) at 10 atm/10sec for stabilizing the peri-stent dissecting flaps. F/U angio revealed sustained multiple contrast extravasation outside the very long stent segment and spiral dissection at far distal part of LAD (final TIMI 1-2)

4th months later, FU angio showed patent previous 4 stents without contrast extravasation and distal spiral dissection. IVUS also revealed no more peri-stent echolucent contrast retention and longitudinal crescent-like intramedial hyper-echoic lesion. Additional stent at pLCx (Biomatrix 4.0x14) was deployed for complete revascularization because the entire RCA has diffuse long lesion without any complication.
Case Summary:
We experienced very long segment dissection and intramural hematoma during treating unstable angina patient with stents. During PCI, unexpected long-segment LAD dissection to distal end (NHLBI type C, D, F) on angiogram and IVUS was observed. We successfully but frustratingly managed this disaster with additional stents. Four months later, we confirmed the fully recovered peri-stent dissection flap, intramural hematoma, and spiral dissection at the end of LAD.







TCTAP C-157

Blind Sight

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[Clinical Information]
Patient initials or identifier number:
R L
Relevant clinical history and physical exam:
64 years old male CABG done 6 years ago comes with history of rest angina NSTEMI.
Relevant test results prior to catheterization:
LVEF=35%
Relevant catheterization findings:
Coronary Angiography shows significant stenosis at LIMA and LAD anastomosis site.
[Interventional Management]
Procedural step:
LIMA cannulated with IMA guiding catheter wired with Rinato J tip wire. As soon as stent was passed LIMA went into severe spasm and could not see anything on injection. After removing stent and giving NTG flow it was normal. Again as soon as stent was passed we could not see anything, patient had severe chest pain and ST-T changes, hence it was decided to with anastomical landmarks and stent was inflated.